

## CLAIMS

What is claimed is:

1. A substrate for the attachment of a ball grid array electronic package thereto by means of solder balls and solder paste wherein connection is made between a contact on the ball grid array electronic package and a solder ball by means of a first joining medium and between said solder ball and a contact arranged on the substrate by means of a second joining medium and wherein the contact arranged on the substrate is substantially quadrilateral in shape.
2. A substrate as claimed in claim 1 wherein the contact arranged on the substrate is substantially square in shape.
3. A substrate as claimed in claim 1 wherein the joining medium is solder paste.
4. A substrate as claimed in claim 1 wherein said solder ball has an initial, substantially round shape prior to making said connection.
5. A method of attaching a ball grid array electronic package to a substrate comprising the steps of:
  - applying a first joining medium to a plurality of contacts located on the ball grid array;
  - locating a solder ball on each of the plurality of contacts of the ball grid array;
  - heating the ball grid array to a temperature sufficient to join each of the solder balls to the corresponding contact on the ball grid array by means of the first joining medium;

7 applying a second joining medium to a plurality of contacts located on the substrate;

8 positioning the substrate and the ball grid array such that each of the solder balls is  
9 located adjacent its corresponding contact located on the substrate, the corresponding  
10 contact being substantially quadrilateral in shape;

11 heating the ball grid array to a temperature sufficient to join each of the solder balls to the  
12 corresponding contact on the substrate, by means of the second joining medium; and

13 inspecting, by means of X-Ray, the connection formed between the ball grid array and the  
14 substrate.

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6. A method as claimed in claim 5 wherein the contact arranged on the substrate is substantially square in shape.
7. A method as claimed in claim 5 wherein the joining medium is solder paste.
8. A method as claimed in claim 5 wherein each of the solder balls has an initial, substantially round shape prior to the heating of the ball grid array.

*add A'*